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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.              | CONFIRMATION NO.       |
|---|-------------|----------------------|----------------------------------|------------------------|
| 10/552,031  | 10/03/2005  | Atsuya Kato          | 050590                           | 6974                   |
| 23850 7590 04/10/2009<br>KRATZ, QUINTOS & HANSON, LLP<br>1420 K Street, N.W.<br>Suite 400<br>WASHINGTON, DC 20005 |             |                      | EXAMINER<br>SCHIRO, RYAN RAYMOND |                        |
|   |             |                      | ART UNIT<br>1792                 | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/552,031

**Applicant(s)**

KATO ET AL.

**Examiner**

RYAN SCHIRO

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/US)  
Paper No(s)/Mail Date 01/07/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claim 14 was added in an amendment to the claims dated January 7, 2009. Claims 1-14 and pending and presented for examination.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (JP 04066172) in view of Takahashi et al. (US 3883453, herein referred to as '453).

Takahashi is drawn to a method for forming a coating containing a thermosetting resin on a metal raw material (abstract). The liquid coating composition is comprised of monomers such as hydroxyl, carboxyl and amino group containing monomers (p. 6, para. 1). Specifically, an alkyl ester (having C 1-11) of methacrylic acid can be included, as required by claim 1 (p. 7, para. 2). It is favorable for the hydroxyl and carboxyl group-containing resin to have a hydroxyl value of about 30 to 200 and an acid number of about 20 to 150, as required by claim 1 (p. 8, para. 3). In a preferred embodiment of Takahashi, 30 parts by weight of methylated melamine resin are added to 70 parts by solids content of acrylic resin, which is about 42 parts per 100 parts, as required by claim 2 (p. 20, para. 2). Another preferred embodiment teaches the addition of a hydroxyl-containing unsaturated monomer of hydroxylpropyl methacrylate, as required by claim 3 (p. 20, para. 2).

The coating is meant to be applied to a car wheel made of aluminum alloy, as required by claim 5. Conventionally-known additives, pigments and the like for coating materials can be compounded with the water-based coating material (p. 15, para. 1). A finished cured coating can be obtained by performing baking after the coating of the water-based coating material on the aluminum wheel, as required by claims 7-13 (p. 16, para. 2). A multilayered coating can be obtained by performing baking after further coating a thermosetting topcoat coating material on the water-based coating, as required by claims 7-13 (p. 17, para. 1). The thermosetting top

coating has outstanding finished appearance, weatherability, color retention, among other properties, as required by claims 7-13 (p. 17, para. 2).

Takahashi does not teach the percentages of copolymers, specific monomers and epoxy resin, as required by claims 1-4.

'453 teaches a coating composition containing a copolymer of alkyl esters of acrylic or methacrylic acid and amino resin, as required by claim 1 (abstract). C1 to C20 alkyl esters of acrylic acid and methacrylic acid within the range of 2 to 50 percent, as required by claim 1 (col. 2, lines 17-25). About 4 to 25% of other hydroxy containing monomers, such as 2-hydroxypropyl (meth)acrylate required by claim 3, are preferable components of the mixture (col. 2, lines 45-47 and 50-56). '453 also teaches that a wide variety of other resins such as epoxy, phenolic and vinylic resins can be included in the composition, as required by claims 3 and 4 (col. 4, lines 3-5). The proportion of amino resin in the polymer components is about 10 to 40% by weight, as required by claim 2 (col. 1, lines 31-32).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to combine the teachings of Takahashi, drawn to specific hydroxyl values, acid values, and intended coating use, with the teaching of '453, drawn to specific percentages and monomers as well as epoxy resin. One would have been motivated to make this combination because both teachings are drawn to coating compositions that do not contain a large amount of volatile organic solvents and have higher solids content.

Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Takahashi's acid and

hydroxyl value ranges that correspond to the required acid and hydroxyl value ranges of claim 1. *In re Malagari*, 184 USPQ 549 (CCPA 1974).

Takahashi does not teach the specific acid value range of the resin required by claim 14.

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to modify Takahashi in view of '453 to include the 1-16 mg KOH/g acid number, as required by claim 14. One would have been motivated to make this modification because the acid number of the resin is considered a cause effective variable that can fall within a wide range of values. It is well settled that determination of optimum values of cause effective variables such as the acid number of a resin is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

It is an inherent property of the coating composition taught by Takahashi in view of '453 that the coating composition can be clear because there is no material difference in the composition of the required coating, which can be clear, and the coating taught by Takahashi in view of '453. Therefore, the teachings of Takahashi in view of '453 are drawn to a coating that can be clear, as required by claim 6.

Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of '453 further in view of Hirata et al. (US 5252399).

Takahashi in view of '453 does not specify a powdered primer precoat or a clear coating, as required by claims 8-13.

Hirata teaches a weather-resistant coating for aluminum wheels (col. 1, lines 5-25) having good corrosion resistance consisting of a primer layer of a powder coating composition, a base

coat layer of an acrylic composition formed on the powder layer, a topcoat composition on the base coat layer and a clear acrylic barrier coating formed on the topcoat composition, as required by claims 8-13 (col. 2, lines 37-50).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to modify the teachings of Takahashi in view of '453, drawn to a primer coating with a colored coating applied thereon, with the four layer coating process taught by Hirata. One would have been motivated to make this modification because all of the references are drawn to lowering the amount of organic solvents used in the coating. Also both Hirata and Takahashi are specifically drawn to having good weather resistance and being applied onto an aluminum automobile wheel.

### ***Response to Arguments***

In response to applicant's argument that there is no suggestion to combine the Takahashi and '453 references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, '453 teaches that a higher solids content during spraying operations can be obtained, resulting in the use of a lesser amount of thinner, due to the favorable viscosity-concentration relationship. This leads to a favorable situation with respect to anti-pollution restrictions. This advantage is also sought by the teaching of Takahashi, which teaches the use of water to lower the environmental impact of the resin coating instead of

solvents. Although the applicant states that the compositions of '453 and Takahashi are not compatible, the suggestion of '453 to use more solids content for a lower environmental impact is an improvement on the water dispersed composition.

In regards to the combination of the Hirata reference with Takahashi in view of '453, one would have been motivated to make the combination because Takahashi teaches a specific acrylic resin coating that can be used with a plurality of substrates and Hirata teaches an improved method of using acrylic resin coatings to specifically protect wheel substrates.

In regards to the argument of unexpected results on pages 10 and 11 of Applicant's arguments, Applicant claims that the teaching of '453 would not allow for the formation of a coating with excellent sag and pop preventative properties or the formation of a clear coat with excellent recoat adhesion and a primer coat with excellent adhesion. The Examiner disagrees. '453 teaches that higher coating buildup, which is essentially the same as the ability of a coat to be recoated, and excellent sag resistance can be achieved using the composition (col. 4, lines 36-39). It would be obvious to a person ordinarily skilled in the art to use a coating that can achieve a high coating buildup as a primer coating or as a coating meant to be recoated. One would have been motivated to do this because a primer coating or a coating meant to be recoated is essentially the same as a coating that can achieve high buildup in the absence of specific drying or other steps between coating applications. Also, '453 teaches the composition has improved pop resistance that is twice the amount of conventional coatings. In response to applicant's argument that the prior art does not specifically teach a coating that can be a clear coating, the fact that applicant has recognized another advantage which would flow naturally from following



the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

### ***Conclusion***

Claims 1-14 are rejected.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Schiro whose telephone number is 571-270-5345. The examiner can normally be reached on Monday-Friday from 8:30 AM to 6 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan Schiro  
Art unit 1792

/Michael Barr/

Supervisory Patent Examiner, Art Unit 1792